



New Hampshire Mosaic Parcel Map Project

Geographic Information Systems (GIS)

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NH Department of Revenue Administration



Presentation Goals

- Review total capital improvement at Department of Revenue
- Get to know New Hampshire better!
- Develop better understanding of Geographic Information Systems (GIS)
- Identify usable and available data streams
- Discuss data sharing potential



Granite to Green

Information Systems Modernization

- \$7 Million capital modernization effort
- Includes all aspects of business
- Moving Department of Revenue from mostly manual processes to mostly automated processes
- Relying on both deploying new systems and maximizing human capital
- Integrates LEAN process improvements



New Hampshire: More Than A Primary!



- 8,953 square miles
- 1,316,470 people
- About same population as
Memphis, TN or Buffalo, NY
- 147 persons per square mile
- Ranked 23rd in density
- 617,704 housing units

Source 2010 US Census



New Hampshire: More Than A Primary!



- 10 Counties
- 33,055 people in smallest (Coos, we say it Co-oss)
- 18.4 persons per square mile
- 400,721 people in largest (Hillsborough)
- 457.4 persons per square mile

Source 2010 US Census



New Hampshire: More Than A Primary!



- 259 cities, towns and unincorporated places
- The smallest have few or no residents
- The largest are Manchester and Nashua, both located in Hillsborough County



What is GIS?

- GIS is a system for managing data that has geographic element
- Brings together the sciences of Cartography, Statistical Analysis, and Database Management
- It is a system that creates and manipulates spatial areas that are mostly jurisdictionally-oriented

How is GIS Data Shared?

- Fundamentally like any database, with direct link to a map
- Good functioning system allows for either map searching or data mining

DRA Web GIS Property Card
NEW HAMPSHIRE DEPARTMENT OF REVENUE ADMINISTRATION

69 GROVE AVE, Salem New Hampshire

NHGIS ID: 08188-2395-2395	Muni. ID: 73-2395	CAMA ID: 4720
Town: Salem	County: Rockingham	Town ID: 188
Map: 73	Block: 2395	Unit: 188
Map Cut:	Block Cut:	Lot Cut:
		Unit Cut:
		No Cards:

Owner Information

Owner: HAMILTON STEPHEN W & GLENDA Co-Owner:
Mailing Address: 69 GROVE AVE SALEM, NH 03079-2234

Land Information

Area: 0.28000459 ac Zone: RES Use Code: Local: 1013 State: NA
Flood Code: Util Code 1: Util Code 2: Traffic Code:
Excess Frontage: Waterfront: View Factor:

Building Information

Type 1: Colonial	Year Built: 1920	Rooms: 6	Beds 2	Baths: Full 1 Half: 0
Area (N): 1480 sqft	Cond: Average	I-Wall: Drywall/Sheet	Roof Type: Gable/Hip	
Area (G): 1616 sqft	Grade: 3	X-Wall: Vinyl Siding	Roof Cover: AsphF	

Transaction Information

Date: 1992-09-20 00: Price: \$ 0 Book & Page: 2949/1376
Grantor:

Assessment Information

Land: \$231900	Building: \$120900	Features: \$0	Total: \$352800
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Supplemental Information

Current To: 2011-07-21	Records: 12594	State Owned:	LND Vpsf: 19
Updated: 2011-09-16	Parcel Link? Yes	Ratio:	BLD Vpsf: 74.8



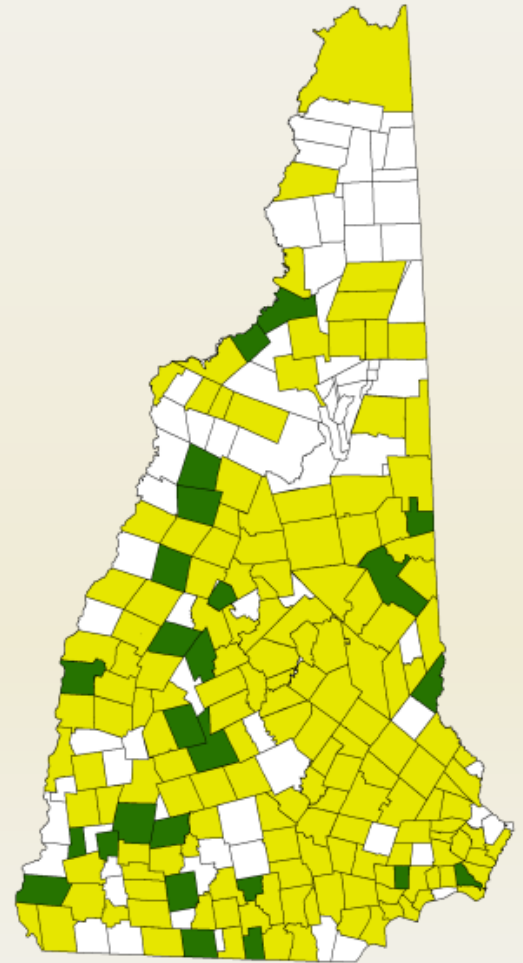
Mosaic Parcel Map Project

1. Annually assemble
 - a. GIS mosaic parcel layer for the entire state
 - b. CAMA database with 50 attributes per parcel for every property in the state
2. Replace the existing property tax equalization system with an internal .net application
3. Integrate/develop the necessary data streams to maintain the systems



Data Streams

- Municipal Data
 - Parcel & CAMA data submitted annually
 - Information regarding individually validated sales regularly
- County Data
 - Sale index transferred automatically via FTP each night
- Taxpayer Filed State Data
 - Development of Adobe LiveCycle and e-file solution





New Hampshire

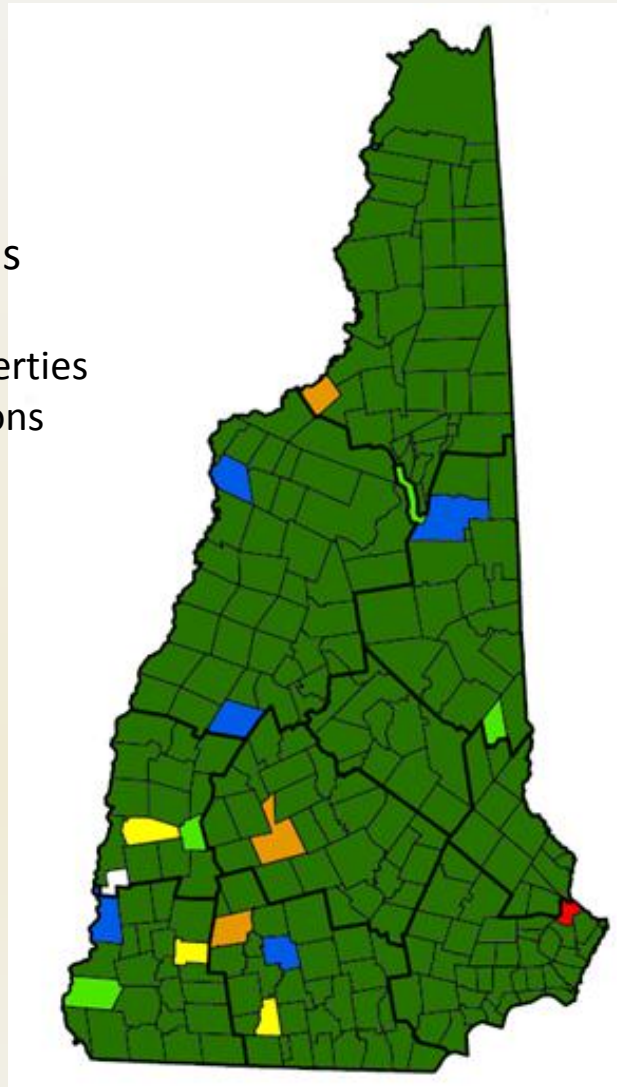
259 Towns

234 Municipalities

25 Unincorporated locations

235 Taxing jurisdictions

- 680,000 taxable properties
- 550,000 parcel polygons



Mosaic Pilot Project

12/15/2009-4/15/2010

18 Municipalities

- 116,730 CAMA records
- 99,970 Parcel records

Mosaic Initial Build

4/16/2010-6/30/2011

177 Municipalities

- 570,335 CAMA records
- 389,704 Parcel records

Mosaic Update Year 1

7/1/2011-7/30/2012

224 Municipalities

- 670,144 CAMA records, 99%
- 565,890 Parcel records, 98%



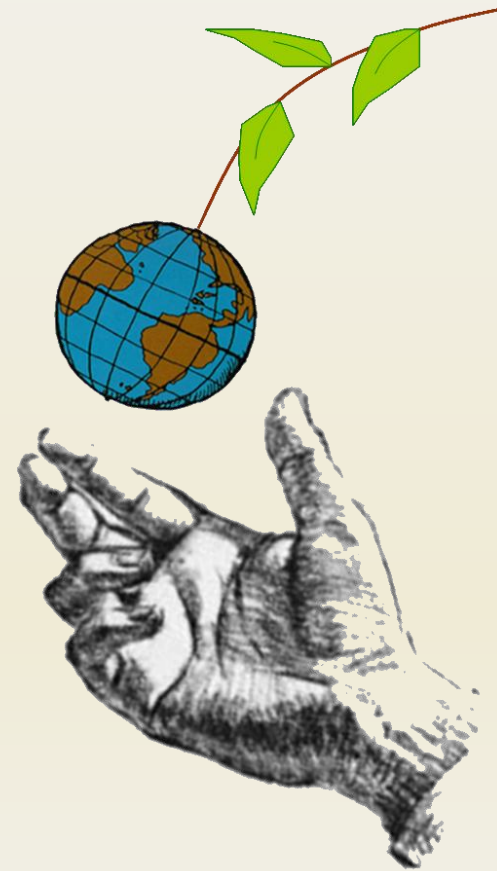
Where are we today?

- Collection effort began 4 weeks ago
- In the few weeks since initial request:
 - 263,203 CAMA records (39% of state)
 - 95 Towns (40% of state)
- Largest cities have not reported yet. Largest town so far:
 - 9,932 records



Web Mapping Services

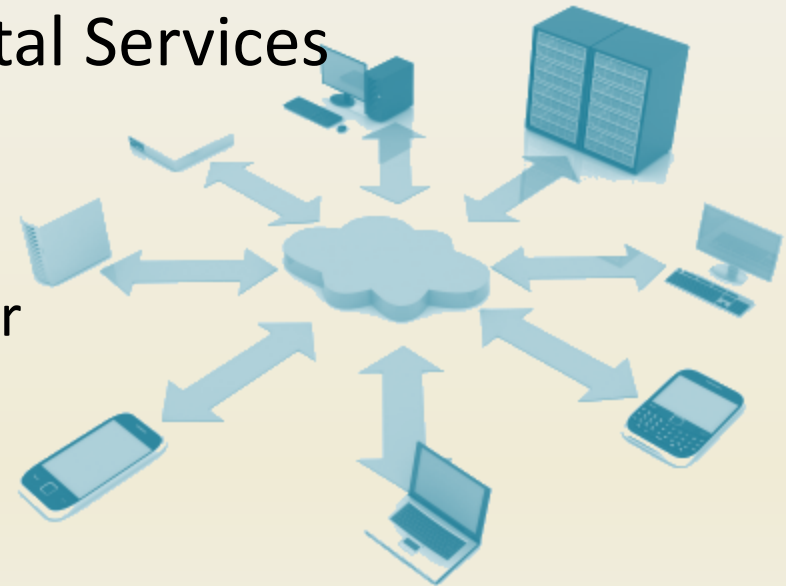
- Secure web mapping services:
 - Parcels
 - Linked CAMA database
 - Buildings
 - Roads
 - Water Bodies
 - Parcel Numbers





Sharing Data

- DRA is sharing with other state agencies:
 - Department of Transportation
 - Department of Environmental Services
 - Department of Safety
 - E 911 System
 - Emergency Operations Center
 - Division of Forest and Land
 - Fish and Game Division
 - Office of Energy and Planning
 - Board of Tax and Land Appeals





Sharing Data

- DRA is also sharing with all nine of the Regional Planning Commissions
- We are also creating with participating municipalities:
 - A data sharing pool with access by all pool members to all other pool member's data
 - Provides access to assessors for valuation and verification of property ownership and residency
- Currently exploring potential of developing Private-Public partnership with utilities to share data for outage management and reporting





Conclusions

- It is possible to create and maintain a database of all locally assessed property within a small but very complicated state
- Finding the right combination of local benefit creates a strong desire to provide information
- Local government recognizes that disaster relief and recovery is a local benefit
- That desire will fuel sustainability of the entire dataset!



Recent Accolade!

- The Ash Center for Democratic Governance and Innovation at the John F. Kennedy School of Government, Harvard University announced September 25, 2012, it has recognized 111 innovative government initiatives as Bright Ideas.
- Mosaic parcel project has been included as one of these important examples of imaginative government solutions.



New Hampshire Mosaic Parcel Map Project



A Joint Project: University of New Hampshire New Hampshire Department of Revenue Administration

